Nebraska Information Technology Commission

2000 Report to the Legislature

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Executive Summary

The Legislature established the Nebraska Information Technology Commission (NITC) in 1998. The purpose of the NITC is to establish a statewide strategy for information technology development in Nebraska. The NITC has responsibility for technical standards and guidelines, preparing guidelines for project planning and management, and making recommendations on technology investments to the Governor and Legislature. In addition, the NITC awards grants from the Community Technology Fund and the Government Technology Collaboration Fund. The responsibilities of the NITC fall into three general areas:

- Provide strategic direction
- Assist policy makers with budget decisions
- Improve management and accountability of information technology

The NITC consists of 9 members appointed by the Governor and confirmed by the Legislature. Members include representatives of elementary and secondary education, post secondary education, communities, and the general public. The Lt. Governor serves as chair of the NITC.

The NITC meets at least quarterly. It has established three working groups to advise the NITC on information technology issues. The Community Council consists of 24 members representing agriculture, business, health, libraries, local government, and resource providers. The Education Council includes 16 voting members, with equal representation of K-12 representatives and post-secondary institutions. There are 4 non-voting members from government agencies with major responsibilities in education. The State Government Council has 21 members from a cross section of large and small state agencies and two representatives of the private sector.

In addition, state statute created the Technical Panel, which conducts technical reviews of projects and recommends technical standards and guidelines to the NITC. The Technical Panel has six members from state agencies and institutions with statewide information technology responsibilities.

During this reporting period, the NITC has focused its efforts on the following activities:

- Preparing the Statewide Technology Plan;
- Reviewing and making recommendations on budget requests for new and additional state spending, including a process for evaluating and prioritizing projects;
- Conducting a competitive process for awarding technology grants;

- Adopting an information technology planning and reporting process for state agencies to share best practices and to identify collaborative opportunities;
- Conducting technical reviews of grant requests for funding from the Community Technology Fund, Government Technology Collaboration Fund, Education Innovation Fund, and State Records Board grants;
- Sponsoring work groups to develop technical standards and guidelines, including security policies, e-government architecture, network standards and accessibility issues;
- Adopting project status reporting requirements and establishing a web site for project management;
- Creating a clearinghouse on the Internet for technology issues;
- Encouraging collaboration on a wide range of information technology issues;
- Monitoring the status of enterprise information technology projects.

Statute requires the NITC to prepare and annually update a statewide technology plan. The NITC adopted the first version of the plan in January 2000. Entitled UNITED 2000, the plan identifies goals and priorities of the NITC, lays the groundwork for systematically defining a comprehensive set of standards and guidelines for the state's technical infrastructure, and establishes planning and project management guidelines. The plan also recognizes specific action items organized in the following themes:

- Promoting economic development and universal access
- Promoting IT efficiency and management
- Promoting e-government

The Statewide Technology Plan serves as a point of reference for agency technology plans and budget requests; for awarding grants from the Community Technology Fund and Government Technology Collaboration Fund; and for strategic planning initiatives as diverse as telecommunications infrastructure, public safety wireless communication systems, criminal justices systems and telehealth applications.

The purpose of this report is to summarize the NITC's activities and actions regarding the duties specified in LB924, and to provide documentation useful to the Legislature as it performs its mandated review of the Commission in January of 2001 (pursuant to section 86-1514).

Background and Summary of Duties

On April 2, 1998 LB924 was enacted by the. The bill formalized in statute the existence of the Nebraska Information Technology Commission (NITC). Members of the NITC, appointed by the Governor and approved by the Legislature, were designated to include:

- One member representing elementary and secondary education;
- One member representing postsecondary education;
- One member representing Nebraska communities; and
- Five members of the general public with experience in developing strategic plans and making high level decisions regarding information technology.

The Governor or the Governor's designee was charged with serving as the Chair of the Commission.

The NITC would be allowed to employ or designate an executive director to provide administrative and operational support. The bill also created the office of the Chief Information Officer (CIO). The CIO would be appointed by the Governor with the approval of the Legislature. A technical panel, consisting of representatives drawn from the Nebraska Educational Telecommunications Commission, the University of Nebraska Computing Services Network, the Department of Administrative Services and at least one member from the project sector, was also created.

LB924 established specific duties and responsibilities for the NITC. To summarize the duties written in NEB. REV. STAT. § 86-1506, the NITC shall:

(1) Develop, review, and annually update a statewide technology plan;
(2) Create a technology information clearinghouse to identify and share best practices;
(3) Adopt policies to provide incentives for investments in information technology infrastructure services;
(4) Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, research and development investment, support and maintenance requirements, and system usage and assessment guidelines;
(5) Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure;
(6) Adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel created in section 86-1511;
(7) Establish ad hoc technical advisory groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs for education, local communities, and state agencies;
(8) By November 15 of each even-numbered year, make recommendations on technology investments to the Governor and the Legislature, including a

prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested;
(9) Approve grants from the Community Technology Fund and Government Technology Collaboration Fund;
(10) Adopt schedules and procedures for reporting needs, priorities, and recommended projects.

In 2000, the Legislature expanded the duties of the NITC. LB 1349 (Information Technology Infrastructure Act) requires the NITC to review and approve plans for projects funded by the Information Technology Infrastructure Fund. Specific responsibilities of the NITC include:
(1) Determine whether the project plan is consistent with the proposal authorized by the Legislature;
(2) Evaluate whether the project plan is consistent with the statewide technology plan and the Commission's approved technical standards and guidelines;
(3) Review semi-annual progress reports.

Mission and Vision Statements

On April 14, 1999, commissioners revised and adopted the following vision statement for the NITC:

> *The vision of the Nebraska Information Technology Commission is to promote the use of information technology in education, health care, economic development, and all levels of government services to improve the quality of life of all Nebraskans.*

The Commission also modified and adopted the following mission statement:

> *The mission of the Nebraska Information Technology Commission is to make the State of Nebraska's information technology infrastructure more accessible and responsive to the needs of its citizens regardless of location while making government, education, healthcare and other services more efficient and cost effective.*

Commissioners and Staff

On February 25, 1999, Governor Mike Johanns' nominated list of appointees to the Transportation and Telecommunications Committee was approved and submitted to the Legislature. The nominees were:

> *Lt. Governor David Maurstad, Dr. Douglas Christensen, Dr. L. Dennis Smith, Greg Adams, Dr. Eric Brown, H. H. Kosman, L. Merril Bryan, Gary Kuck, and U.S. Senator J. Robert Kerrey.*

The appointees were approved by the Legislature on March 1, 1999.

On April 10, 2000, Governor Johanns' requested nomination of *H. H. "Hod" Kosman* for a second term and the nomination of *Pamela Vanlandingham* to replace Sen. Kerrey were forwarded to the Transportation and Telecommunications Committee, where the nominations were approved and submitted to the Legislature. The appointees were approved by the Legislature on April 12, 2000.

NITC Commissioners

Lieutenant Governor Dave Maurstad, Chair
Greg Adams, Mayor of York
Eric Brown, Station Manager, KRVN-AM Radio
L. Merill Bryan, Jr., Senior Vice-President, Union Pacific
Doug Christensen, Commissioner of Education, Department of Education
H. H. Kosman, President, Platte Valley Financial Service Companies
Gary Kuck, President & CEO, Centurion International
L. Dennis Smith, President, University of Nebraska
Pamela Vanlandingham, Senior Vice President, CSG Systems, Inc.

NITC Staff

Michael Winkle, Executive Director
Steven Schafer, Chief Information Officer
Rick Becker, Government Information Technology Manager
Tom Rolfes, Education Information Technology Manager
Anne Byers, Community Information Technology Manager
Lori Lopez Urdiales, Administrative Assistant
Jen Soucie, Staff Assistant I for Research

Documentation: Minutes and agendas for 1999 and 2000 meetings
Appendix 1 (http://www.nitc.state.ne.us/nitc/meetings/prior.htm)

Advisory Groups

Part 2 of the Statewide Technology Plan established a process for establishing technical advisory groups. For technical advisory groups to be formally recognized by the NITC, the recommended approach for defining these relationships is through the preparation of formal charters. These charters will outline the mission and responsibilities of each coordinating entity, its membership and operating procedures. The objective of this charter process will be to formalize the dialogue between the NITC and existing information technology coordinating entities to determine how they might best participate in the NITC planning processes.

Formal charters have been drafted and approved for the three NITC councils (Community, Education, and State government) and for the Technical Panel. Each of the Councils and the Technical Panel have also established working groups and sub-committees to address specific needs or projects. Examples include workgroups involved in defining technical architectures for security, assistive technology, infrastructure and e-government; a telehealth subcommittee supporting Community Council activities; and three educational working groups involved in various distance learning coordination efforts.

Other interested information technology entities seeking advisory group status are invited to follow these models by submitting draft charters to the NITC Executive Director. The Executive Director will work with the NITC and existing technical advisory groups to determine the best means for incorporating these additional entities or groups into the NITC's planning process. The first priority will be to include new entities by establishing cooperative and collaborative relationships with the existing technical advisory groups. This priority is reflective of the legislative intent to minimize bureaucracy in all processes and procedures involving the NITC. Examples of existing entities involved in NITC processes currently include the Criminal Justice Information System (CJIS) project, the Nebraska Intergovernmental Data Communications Advisory Council (NIDCAC) and the Geographic Information Systems (GIS) Steering Committee.

This process for establishing advisory groups and the committees documented in this report addresses the following statutory duties of the NITC:

- *Establish ad hoc technical groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs for education, local communities, and state agencies.*

Documentation: **Appendix 2**

Education Council Charter
(http://www.nitc.state.ne.us/ec/documents/eccharter.html)

State Government Council Charter
(http://www.nitc.state.ne.us/sgc/documents/charter.htm)

Community Council Charter
(http://www.nitc.state.ne.us/cc/cccharter.htm)

Technical Panel Charter
(http://www.nol.org/home/IRC/pdf/documents/tpcharter.pdf)

Statewide Technology Plan

The NITC adopted and approved the first statewide technology plan on January 25, 2000. The Statewide Technology Plan, entitled UN**IT**ED **2000**, identifies goals and priorities of the NITC, lays the groundwork for systematically defining standards and guidelines for the state's technical infrastructure, establishes planning and project management processes, and recognizes specific actions to be taken.

The Statewide Technology Plan consists of five major sections:

- **Part 1, Goals,** sets forth the strategic goals for the plan as determined by the NITC. The goals articulate the issues and opportunities the NITC has identified as statewide information technology policy priorities, and will serve as the framework used by the Commission in determining their prioritized list of budget recommendations to the Governor and the Legislature. To develop the goals for the Statewide Technology Plan, the NITC looked to policy pronouncements by the Governor, to legislative intentions as stated in LB 924 (1998), and to the NITC's own mission and vision statements.

  Part 1 also sets forth the sector priorities as determined by the Community, Education, and State Government Councils. Council priorities focus on each sector's unique programmatic requirements and will provide the basis by which the councils evaluate and forward prioritized recommendations from their sectors to the NITC.

- **Part 2, Coordination of Information Technology Advisory Groups,** describes the efforts to solicit and integrate information technology needs and plans from a broad cross-section of Nebraska interests for consideration in the development of the current and future statewide technology plans. Section 86-1506 (7) states that the NITC shall "Establish ad hoc technical advisory groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs for education, local communities, and state agencies."

  To lay the foundation for coordinating information technology planning in the future, Section 2 sets guidelines for defining the process by which relationships between and among the NITC, technical advisory groups, and other information technology coordinating entities are established through the preparation of formal charters. These charters outline the mission and responsibilities of each coordinating entity, its membership and operating procedures. The objective of this charter process is to establish a dialogue between the NITC and existing information technology coordinating entities to determine how they might best participate in future NITC-sponsored planning processes. In some cases this will be as an advisory committee reporting directly to the NITC, in some cases it will

be as a subcommittee to another advisory committee, and for some cases it may be through a formal process that submits specific recommendations from independent planning initiatives.

The following general considerations are used to guide the integration of information technology coordination efforts:

1. Existing information technology coordinating groups should have a clearly defined mechanism and/or process for providing input into the process of developing statewide technology plans;
2. There is a practical need to have a manageable number of groups reporting directly to the NITC;
3. Where there is a high degree of overlap of functions and responsibilities between existing coordinating groups, a merger or subcommittee structure should be considered;
4. Special care should be given to strengthen and not hinder those existing information technology coordinating groups that have helped develop and implement collaborative information technology projects.

- **Part 3, Technical Infrastructure**, describes how the Technical Panel meets its responsibility for developing critical elements of the technical infrastructure plan. The Technical Panel shall recommend a technical infrastructure that will be scalable, reliable, and efficient. For purposes of the Statewide Technology Plan, technical infrastructure refers to all aspects of information technology such as computer equipment and operating systems, databases, customized software, non-customized applications, local area networks, wide area networks, telecommunications, staffing, training, project management and quality control standards and guidelines. The Technical Panel shall discharge its responsibilities in a manner consistent with Section 86-1502.

  The Technical Panel's recommendations include technical guidelines that are necessary to the success of the technical infrastructure plan, pursuant to Sections 86-1506 and 86-1511. This section of the plan establishes a process for developing, reviewing, and recommending guidelines and standards for the technical infrastructure. The plan describes an inventory of the major components of the current infrastructure, identifies strengths and limitations, and establishes an evaluation process which translates the programmatic assessments into potential technical requirements. Included is a study of options for aggregating demand for telecommunications services across the state. The technical infrastructure plan should reconcile and incorporate key components from current technology plans of individual agencies.

  The Technical Panel consults with providers of services to obtain advice on the status of the current infrastructure, industry trends, cost estimates, and options

for new, expanded, or enhanced services. The Technical Panel also seeks suggestions from technical personnel in state and local agencies and educational entities. The NITC councils and other coordinating entities also have the opportunity to review and comment on Part 3.

- **Part 4, Planning and Project Management,** provides the methods for encouraging proper planning, management, and adherence to the statewide technology plan. Statute requires the NITC to review and make recommendations on technology investments to the Governor and Legislature, including a prioritized list of projects. The plan includes the NITC procedures for:
    1. Project planning
    2. Project management
    3. Project measurement
    4. Project reviews
    5. Prioritizing projects

  Project planning details what information is required to define the scope and objectives, requirements, cost, and timeframe. Such information includes a credible business case, identification and quantification of project benefits, examination of work processes, change management, and risk analysis.

  Project management defines the responsibilities of project sponsorship, monitoring, and reporting.

  Project measurement allows a means to document value-added benefits, monitor the scope and objectives of projects, and compare costs.

  Project reviews are designed to investigate technical feasibility and compatibility with the Statewide Technology Plan. To meet the requirements of Section 86-1506, this section also includes the methods by which the NITC prepares a prioritized list of projects, reviewed by the Technical Panel, for which new or additional state funding is requested; by which technical reviews are conducted, by which the Community Technology Fund grants and the State Government Collaboration Fund grants are administered; and by which state agency technology plans are developed.

  In preparing Part 4, the NITC has observed the requirements of Section 86-1502 that require the NITC's procedures not impede the rapid deployment of appropriate technology or establish cumbersome regulations or bureaucracy.

- **Part 5, Implementation Plan,** identifies the strategies, priorities, and specific steps to put the Statewide Technology Plan into place. The implementation plan

addresses council action plans, other information technology action plans and recommendations from communities of interest, long-range funding strategies; strategic directions for the state's technical infrastructure, options for current and future collaborative opportunities, and the development of an information clearinghouse and other information dissemination strategies.

*UNITED **2000** addresses the following statutory duties of the NITC:*

- *Develop, review and annually update a statewide technology plan;*
- *Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure {see Part 4, Planning and Project Management};*
- *Adopt minimum technical standards, guidelines and architectures upon recommendation by the Technical Panel {see Part 3, Technical Infrastructure};*
- *Establish ad hoc technical groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs for education, local communities, and state agencies {see Part 2, Coordination of Information Technology Advisory Groups};*
- *Adopt schedules and procedures for reporting needs, priorities, and recommended projects.*

Documentation: UNITED **2000** Nebraska's Statewide Technology Plan
Appendix 3 **(**http://www.nitc.state.ne.us/stp/index.html)

Comprehensive Information Technology Plans for State Agencies

A component of the Statewide Technology Plan established the requirements and procedures for preparing comprehensive information technology plans for all state agencies. Comprehensive information technology plans should document how an organization's use of information technology supports its goals, objectives and functions. The plans provide a baseline view of current systems and provide strategic direction for future investments in information technology. The level of detail should be sufficient to assist high-level decisions, but does not substitute for specific project plans used for budgeting. As public documents, comprehensive technology plans serve as a means for communicating with other agencies and organizations that may be affected.

The comprehensive technology plans serve the following purposes:

- Assist decision-making at the organizational and statewide levels;
- Create a structured planning process for information technology;
- Integrate agency information technology planning with the state's biennial budget process;
- Catalog the state's information technology assets;
- Provide a clearinghouse of plans to encourage sharing of best planning practices;
- Promote compatibility between an organization's strategic direction for information technology and the NITC's Statewide Technology Plan.

The development of state agency comprehensive information technology plans addresses the following statutory duties of the NITC:

- *Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure;*
- *Create an information technology clearinghouse to identify and share best practices;*
- *Adopt schedules and procedures for reporting needs, priorities, and recommended projects.*

Documentation: Report on State Agency Comprehensive Technology Plans
Appendix 4

Recommendations to the Governor and Legislature on Technology Investments

By November 15 of each even-numbered year, the NITC is required to make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the Technical Panel, for which new or additional funding is requested.

All state agencies and public higher education institutions requesting state appropriations for information technology must prepare a project proposal for each information technology project. An information technology project is defined as a specific series of activities involving the implementation of new or enhanced IT systems for the sponsoring agency.

A project proposal is required whenever new or additional state appropriations (regardless of fund type) are required for implementation. Project proposals provide detailed information about the purpose, scope, justification, and implementation of new projects and major changes to existing systems. Agencies should prepare a project proposal for all projects requiring new or additional funding. The degree of detail in each plan should correspond to the magnitude of the project. Major components of each project proposal are listed below:

- General Information
- Executive Summary
- Goals and Objectives
- Scope and Projected Outcomes
- Project Justification / Business Case
- Implementation
- Technical Impact
- Risk Assessment
- Financial Analysis and Budget

The prioritization process and the recommendations to the Governor and Legislature on Technology Investments address the following statutory duties of the NITC:

- *By November 15 of each even-numbered year, make recommendations on technology investments to the Governor and the Legislature, including a prioritized list of projects, reviewed by the technical panel, for which new or additional funding is requested.*

Documentation:	Budget Priority Process and Timelines, FY2001-2003 Biennium
Appendix 5	Report to the Governor and Legislature on Information Technology Budget Requests for the FY2001-2003 Biennium

Community Technology Fund Grant Awards

The NITC approves and administers the Community Technology Fund. As stated in NEB REV STAT §86-1506: "The fund shall be used to provide incentives for collaborative community and regional approaches toward more effective and efficient use of technology to meet the needs of citizens, political subdivisions and other entities as determined by the commission. "

The Legislature appropriated $400,000 to this fund for the FY 1999-2001 Biennium and $250,000 for FY 1998-99. In February, 1999, two projects were awarded minigrants totaling $11,990 in round two of the 1998-99 competition. With a mini-grant , the University of Nebraska's Nebraska Electronic Main Street pilot provided training to 90 business owners, employees, and community development resource staff from 16 Nebraska counties. The Northeast Nebraska Regional Information Clearinghouse (NRICHN) designed and implemented a Web-accessible database of community-based resources.

In May, 2000, five projects were awarded a total of $127,868.00. Through the fund, the Norfolk Public Library, Columbus Public Library, and Northeast Community College Library/Resource Center have formed a consortium (ONE Library) to jointly purchase and share a library automation system. The City of Kearney has purchased eleven additional personal computers, enabling the general public to experience and utilize high-speed access to the Internet. The Public Library System of Holdrege will publish its library catalog on the World Wide Web. The Cooperative Extension of the University of Nebraska-Lincoln Center for Rural Community Revitalization & Development (Center) in partnership with the Applied Information Management (AIM) Institute and Nebraska Rural Development Commission will provide Nebraska small-businesses and entrepreneurs with training in electronic commerce.

The guidelines for the 2001 round were published on November 1, 2000 with an application deadline of February 16, 2001.

The approval and administration of the Community Technology Fund grants address the following statutory duties of the NITC:

- *Approve grants from the Community Technology Fund and Government Technology Collaboration Fund.*

Documentation: Community Technology Fund Awards 1999-2000
Appendix 6 (http://www.nitc.state.ne.us/cc/grants/2001/ctf9900awards.htm)

Government Technology Collaboration Grant Awards

The NITC approves and administers the Government Technology Collaboration Fund. As stated in NEB REV STAT §86-1513: " The fund shall be used to provide incentives for collaborative technology projects and programs by state agencies, boards, and commissions and to assist in meeting the technology needs of small agencies as determined by the commission. "

The Legislature appropriated $500,000 to this fund for the FY 1999-2001 Biennium. The NITC awarded a total of $389,579.99 in grant funds to seven applicants in June, 2000. The Nebraska Arts Council received a grant to develop an e-granting system. The Nebraska Criminal Justice Information System will expand access to local law enforcement records management systems. The Department of Labor will determine the feasibility of merging business classification code information developed by the Nebraska Department of Labor with the Nebraska Department of Revenue's sales tax business file. Through its grant, the Volunteer Commission will purchase computers to access a Web-based reporting system. The University of Nebraska's Conservation and Survey Division will digitally archive its aerial photography collection. DAS IMServices will facilitate the development of e-government services by creating a template for Internet-based license applications. The state agencies utilizing Lotus Notes are collaborating to construct a research and testing infrastructure that would empower agencies to share resources and knowledge as well as costs.

The approval and administration of the Government Technology Collaboration Fund grants address the following statutory duties of the NITC:

- *Approve grants from the Community Technology Fund and Government Technology Collaboration Fund.*

Documentation: Government Collaboration Technology Fund Awards
Appendix 7 (http://www.nitc.state.ne.us/sgc/grants/2000/gtcf2000awards.htm)

Telecommunications Infrastructure Needs Assessment (TINA) Study

In 1998, after reviewing the Skjei study on statewide educational needs and services, the NITC requested that the study be expanded to cover state government, local government, and community needs in addition to the educational sector. The Commission authorized $50,000 towards a study directed by the Division of Communications to study statewide telecommunications needs. The objectives of the study were:

- To reduce voice, data and video communication costs of state government;
- To position the state to take advantage of rapidly emerging communications technologies;
- To provide an information infrastructure to support governmental, educational and economic development initiatives throughout the state;
- To establish opportunities for use by other government, education, political subdivision and non-profit units;
- To efficiently leverage the state's purchasing power to create economic development incentives for rural and disadvantaged users;
- To reduce the rate disparity for network and service access throughout the state.

Through a series of initiatives, the NITC recommended that the Division of Communications gather additional information and public reaction through the Telecommunications Infrastructure Needs Assessment (TINA) process, and from that effort develop recommendations for specific actions that would further the development of an enterprise-wide, standards-based deployment of a public-private statewide communications network infrastructure. These actions may include developing a specific set of communication and network requirements, requested services and fiscal boundaries; issuing an RFP consistent with the TINA findings and using the state's aggregated purchasing power to serve as an "anchor tenant" to stimulate information technology and economic development throughout the state; and establishing flat-rate, distance-insensitive pricing for advanced technology and contracted services while providing an incentive for private sector competition and investment in the state's information technology infrastructure.

On April 20, 2000, the Telecommunications Infrastructure Needs Assessment (TINA) Advisory Committee made a recommendation to the Nebraska Information Technology Commission that the state should move forward on pursuing a "prime contractor" alternative for implementation of a statewide telecommunications network. The recommendation was endorsed by the NITC, and the Committee was charged with preparing a business study and implementation plan for the NITC to consider at its November meeting.

As one of the largest consumers of communication services in the state, government is in a unique position to influence the development of the state's communications infrastructure through innovative private-public partnerships. By seizing an opportunity to cease the use of numerous, limited-capacity, single agency data networks by merging requirements and migrating users to an integrated, high-speed network, the state can promote a manageable, enterprise solution for users throughout the state, including remote rural communities. This approach envisions using the competitive marketplace instead of massive public expenditures to acquire the communications bandwidth necessary to conduct state, educational and essential public services.

The state, as an "anchor tenant", proposes to purchase the bandwidth necessary to meet these critical needs without having to "build" and support the network. It is envisioned the contract will result in the design and deployment of a modern, digital communications infrastructure that will interconnect agencies, educational institutions, libraries, local government, eligible healthcare institutions and other political subdivisions. With multiple access points in each county, a connection to critical services such as mainframe applications, e-mail, Internet and other information services is available regardless of distance and past configurations of telecommunication services. Such aggregation of demand also enables the state to economically incorporate communications intensive technologies, such as interactive video-conferencing, large file transfers, image transmission, GIS data dissemination, and electronic commerce applications into routine service delivery strategies.

These initiatives will ensure that the state will not enter the business of building an infrastructure, but rather utilize the services provided by private vendors and provide incentives for further information technology development. This approach will benefit not only state government and local communities but ultimately individual citizens because the infrastructure will be owned and managed by the private sector.

The TINA project addresses the following statutory duties of the NITC:

- *Adopt policies to provide incentives to for investments information technology infrastructure services;*
- *Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, research and development investment, support and maintenance requirements, and system usage and assessment guidelines;*
- *Establish ad hoc technical groups to study and make recommendations on specific topics, including work groups to establish, coordinate, and prioritize needs for education, local communities, and state agencies.*

Documentation: Appendix 8

Recommendation of the TINA Advisory Group for Endorsement by the Nebraska Information Technology Commission (http://www.nitc.state.ne.us/nitc/documents/TINAResolution.htm)

State of Nebraska Telecommunications Infrastructure Needs Assessment (TINA) Communities of Interest Needs Analysis Report (http://www.das.state.ne.us/doc/tina/revneeds.htm)

Business Implementation Plan, TINA Project, Presentation to NITC, November, 2000

Universal Service and Public Access Policy

An action item adopted in the Statewide Technology Plan directed the NITC to determine regulatory barriers to IT development and universal service within the state and develop strategies to address these barriers in partnership with the administration, the Legislature, the Public Service Commission, and other appropriate entities. The goals and objectives of the action were to:

- Foster a political and regulatory environment conducive to IT development;
- Ensure that all Nebraskans have access to quality telecommunications services at reasonable and affordable rates, regardless of geographic location;
- Recommend and implement policies that ensure the preservation and advancement of universal service;
- Work within the Education Council and Community Council to recommend and implement policies and procedures that will maximize the state's return on federal USF funding.

While more Americans are connected to the Internet and other telecommunications services than ever before, a persistent digital divide exists between the information rich and the information poor. In *Falling through the Net: Defining the Digital Divide,* a July 1999 report issued by the U. S. Dept. of Commerce, National Telecommunications and Information Administration (NTIA), found that, regardless of income level, Americans living in rural areas are lagging behind in Internet access.

Since the passage of the Communications Act of 1934, it has been a major public objective that all Americans, regardless of where they live, have access to quality local phone service at reasonable and affordable rates. The Telecommunications Act of 1996 reaffirmed this goal by establishing policies for the "preservation and advancement of Universal Service."

Until 1996, the Universal Service Fund (USF) compensated telecommunications companies that provided service to both low-income communities as well as rural areas where the cost of service was high. In the Act of 1996, the mandate was expanded to include support for schools, libraries and rural health care providers. The USF is generated through contributions from telecommunications providers, including local and long-distance phone companies, wireless and paging companies, and pay phone providers. While consumers benefit from the USF, only companies that provide service may draw money directly out of the fund, which defrays the cost of delivering discounted service to consumers.

Recent FCC decisions on the disbursement of USF monies have raised serious questions about the future of universal service and the affordability of new telecommunications services, like the Internet, for rural, high-cost customers.

Additionally, Federal and State USF formulas, as well as regulatory issues such as cross-LATA surcharges, are commonly identified as potential barriers to eliminating the prospect of a widening digital divide between rural and urban Nebraskans.

The NITC passed a resolution on January 25, 2000 stating:

- The NITC strongly urges the FCC to establish a fully funded national universal service fund accessible by all eligible telecommunications companies, as defined by the Act, prior to any reduction or elimination of existing support. Distribution formulas should reflect the commitment of providing service in high-cost areas on an equitable and nondiscriminatory basis through contributions by all telecommunications providers.

- The NITC strongly urges the FCC to carefully examine its proposed universal service support economic cost model and to take steps to ensure that a fair and equitable result is reached for all citizens, carrying out the clearly stated intent of the Act.

- The NITC shall recommend that the Lieutenant Governor, as Chair of the NITC, communicate and coordinate these policy initiatives on behalf of the NITC and State's interest with the FCC, the State's congressional delegation, Congressional and Legislative oversight committees, the Western Governor's Association and other influential parties, and to report to the Governor, the NITC and the Legislature on future FCC actions.

- NITC staff shall be directed to cooperate with the Public Service Commission and other appropriate parties in preparing recommendations regarding universal service policy development and review for inclusion in the Statewide Technology Plan.

The NITC staff also prepared a white paper entitled *"The Rural Challenge: A Report on Access to Information Technology and the Effect of Universal Service Policies in Rural Nebraska"*. The report was delivered to the Western Governors Association, the Nebraska Congressional delegation, and key Nebraska policy makers on May 27, 2000. The report was also posted on the NITC Web site. The report analyzes universal service issues in Nebraska and provides insight regarding the effect of present FCC programs and policies designed to address universal service issues in rural areas.

Additionally, the Education Council and Community Council are participating in the Telecommunications and Infrastructure Needs Assessment process (TINA study). Future TINA actions and initiatives include aggregating demand and

studying improved efficiencies and effectiveness of filing combined USF funding requests.

The resolution and studies regarding Universal Service Funds address the following statutory duties of the NITC:

- *Adopt policies to provide incentives to for investments information technology infrastructure services;*
- *Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, research and development investment, support and maintenance requirements, and system usage and assessment guidelines;*

Documentation:
Appendix 9

NITC Resolution Regarding FCC Formula for Distribution of National Universal Service Funds
(http://www.nitc.state.ne.us/nitc/documents/NITCFCCResolution.htm)

The Rural Challenge: A Report on Access to Information Technology and the Effect of Universal Service Policies in Rural Nebraska
(http://www.nol.org/home/IRC/pdf/documents/usf.pdf)

Information Technology Infrastructure Act / Nebraska Information System (NIS)

An action item in the Statewide Technology Plan recommended that the Information Technology Infrastructure Act be amended:

- to reflect the role of the NITC and Statewide Technology Plan and to eliminate the sunset provision;
- to more efficiently identify, fund and manage major information technology enterprise projects;
- and to identify revenue sources for enterprise projects.

These measures recognize that justifying information technology projects becomes especially difficult when it involves an investment in technology infrastructure that affects multiple entities. Benefits are harder to quantify, and a sponsoring agency faces additional challenges in documenting the benefits that will accrue to other institutions. This is especially true when there is no direct connection between the investment and the final delivery of a program or service.

Funding is also problematic for infrastructure projects where benefits are indirect or long term. The two-year budget cycle makes timely and effective decisions on larger projects very difficult. All projects follow a sequence starting with a concept, then design, development and implementation. At the start, not enough details exist to allow a fully informed decision for every stage of the project. This situation puts sponsors and policy makers in the position of making a decision on faith or face a one or two--year delay while waiting for further analysis. Once funded on this basis, sponsors have an implicit obligation to complete the project, without undertaking formal reassessment at subsequent stages, regardless of risks that have arisen after the appropriation. The consequence of traditional funding sources is the loss of an enterprise perspective. This means that decisions tend to lack a long-term view, focus on isolated requirements, and diminish broader infrastructure needs.

The century date change (CDC) project to fix Year 2000 problems is a recent example of a complex, large-scale project that involved multiple agencies that occurred over an extended period of time. Funding for the CDC project came from the Information Technology Infrastructure Fund, with project oversight by the Information Resources Cabinet (which was the predecessor to the NITC's State Government Council). This structure ensured that a link existed between funding decisions and planning and project management requirements. This link also insures accountability between the Legislature's policy decisions and detailed project design.

The Nebraska Information System is a major project, of similar scope and complexity as CDC, sponsored by the Department of Administrative Services. It would provide a

fully integrated suite of software applications to serve the financial, human resource, and administrative business processes and reporting needs of state government agencies. The NIS would replace the current centralized accounting and payroll systems and a number of agency-specific subsidiary systems.

The Statewide Technology Plan includes an action item promoting "an enterprise approach to financial, human resource, and administrative business processes and reporting needs of state agencies." This action item recognizes the need to replace the state's existing accounting and payroll systems. NIS fulfilled the requirements of the action plan.

DAS requested funding for NIS in 1998 for the current biennium. The NITC ranked the NIS project as "highly recommended" during its 1998 budget reviews, but stipulated the need for careful study of implementation issues such as workflow requirements. The Legislature responded by appropriating funds for a "critical design review" in order to provide more information about the justification for the system, to examine options, and to answer other questions. During calendar year 1999, DAS conducted the study and presented the results to the Legislature, which approved the request to acquire and implement NIS. LB 1217 Section 65 includes the following intent language:

> "Upon the recommendation of the Nebraska Information Technology Commission, the Department of Administrative Services may utilize any funds appropriated to this program for expenses associated with the Nebraska Information System."

Funding for NIS comes in part from the Information Technology Infrastructure Fund, which the Legislature extended in LB 1349, sponsored by Senator Bromm and Senator Wehrbein. The NITC endorsed LB 1349 in a resolution adopted January 25, 2000. The resolution included two policy recommendations:

- Funding for information technology should require consistency with the Statewide Technology Plan, encourage an enterprise perspective that transcends organizational or programmatic boundaries, promote accountability, and provide flexibility regarding the timing of decisions to approve the project concept and subsequent detailed project plans.
- State government must preserve and restore an enterprise approach to managing information for financial, human resource, and administrative business processes and reporting needs. Enterprise information systems must provide state agencies with the tools for improving efficiency in operations. This should include meeting requirements served by duplicative sub-systems.

LB 1349 provides a source of funding for the NIS and other information technology projects approved by the Legislature. Section 8 of LB 1349 also gives the NITC

responsibility for approving project plans and monitoring the status of projects when the Information Technology Infrastructure Fund is involved. This provision empowered the NITC to fulfill another action item in the Statewide Technology Plan, which recommended that the Office of the CIO/NITC develop a project status reporting system for state agencies, and to monitor the status of of major non-education state government technology projects.

Responding to these responsibilities, the NITC approved a resolution on April 20, 2000, which stated:

- The Department of Administrative Services is authorized to expend funds appropriated in LB 1217 (2000) Section 65 for work relating to vendor selection, project management, and preparation of a detailed project plan to guide implementation.
- The Technical Panel shall review the following documents relating to the NIS: a) the request for proposal, b) the project implementation plan, and c) quarterly status reports. The Technical Panel shall report its findings to the project sponsor and the NITC.
- NITC approval of the project implementation plan is required, prior to further expenditure of funds for the NIS.
- The implementation plan shall include, but not be limited to, objectives, scope, financial plan, change management, project management and project team, timetable and milestones, and technical requirements.

The resolutions regarding LB1349 and NIS address the following statutory duties of the NITC:

- *Adopt policies to provide incentives to for investments information technology infrastructure services;*
- *Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, research and development investment, support and maintenance requirements, and system usage and assessment guidelines;*
- *Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure.*

Documentation: Appendix 10

NITC Resolution on the Nebraska Information System (http://www.nitc.state.ne.us/nitc/documents/NISFundingAuthorizationresolution.htm)

NITC Resolution on LB 1349 (2000) "Information Technology Infrastructure Act Amendments" (http://www.nitc.state.ne.us/nitc/documents/NITCLB1349Resolution1.htm)

Nebraska Information System NITC Application for Funding (http://www.das.state.ne.us/nis/project/NITCAFF02042000.PDF)

E-Government Strategic Plan

The Statewide Technology Plan called for developing a strategy that would document the steps that are necessary to make optimum use of e-government within Nebraska. That action item presented six topics for consideration. These were the state's portal (a single point of entry to information and services), applications, payments, privacy and legal issues, security, and technical infrastructure and standards.

The purpose of the E-Government Strategic Plan has three facets. First, it is intended to achieve the vision and goals of the State Government Council pertaining to e-government. Second, this document strives to communicate those goals, related activities, and opportunities to policy makers. Third, it will guide the efforts of state agencies as they plan and implement e-government solutions.

The following principles guided development of this plan and will guide its implementation:

- E-government should be considered a continuous process of using technology to serve citizens and improve agency operations;
- Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services;
- Agencies have responsibility for performing statutory functions, which means that agency directors must retain ownership of data, responsibility over the use of information technology, and prioritization of projects within the agency to achieve the greatest benefit;
- Cooperation is critical to achieving the goals of e-government, in order to integrate information and services and allow the easy exchange of information;
- An enterprise approach is essential to e-government, including the topics of accessibility for disabled persons, architecture, directories, funding, portal, privacy, security, and other issues.

E-government is a continual process of applying information technology to support agency functions. Although part of an on-going process of innovation and improvement, digital information, Web-based technologies and private and public networks like the Internet create radical changes and new opportunities. Using these technologies makes it possible to deliver information and services without constraints due to time, place, or availability of staff. The convenience and economy of self-service becomes the model for transacting business. Integration of information and services across organizational, geographic and political boundaries becomes feasible, without having to incur the cost of organizational changes. Easier and faster access to information avoids potentially important consequences stemming from the lack of timely data.

These changes affect both internal operations of agencies and external relationships. The result can be streamlined business processes, customer-centric operations, more efficient service delivery, and fewer silos. Businesses and citizens expect the same level of service from government agencies that the private sector is now achieving through the use of these technologies.

The E-government Strategic Plan sets forth a vision, goals and measurable objectives for planning and implementing e-government projects. It also recommends strategic steps, which the State Government Council has prioritized. Much is underway already. For example, the Technical Panel of the NITC has work groups on security policies, network architecture, and e-government architecture. All are essential components of an overall strategy for e-government. Other issues that must be addressed include privacy policies and funding sources for e-government applications and shared projects. Projects to integrate the delivery of information and services are also a priority.

State agencies play a pivotal role in planning and deploying e-government solutions. According to the 1999/2000 Digital State Survey of the Center for Digital Government, Nebraska ranks thirteenth overall for the six categories relating to state government. Nebraska has been a leader in making use of Internet technologies. Much of this progress is due to the innovation and initiative of agencies. An example is the Game and Parks Commission. The Commission deployed its Web site in 1994, when there were fewer than 500 Web sites on the entire World Wide Web. The Commission was the first Nebraska State agency to integrate e-Commerce solutions into their online services and has transacted more than $1.1 million in sales over the Internet.

Future success in deploying e-government applications depends on continuation of an environment in which agencies retain ownership of data, exercise responsibility over the use of information technology, and maintain focus on projects that provide the greatest benefits. The State Government Council's strategic plan for e-government is intended to assist, not supplant the efforts of individual agencies.

The State Government Council has identified e-government and the development of e-government applications as one of its top priorities. The guidelines and awards for State Government Collaboration Grants reflect this priority.

The E-Government Strategic Plan addresses the following statutory duties of the NITC:

- *Adopt policies to provide incentives for investments in information technology infrastructure services;*

- *Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure;*
- *Adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel created in section 86-1511.*

Documentation: E-government Strategic Plan
Appendix 11 **(**http://www.nitc.state.ne.us/sgc/workgroups/egovstrategy/strategy.pdf)

See also Government Technology Collaboration Grants

Project Planning and Management Requirements

Information is a critical resource in government and many private sector activities. Virtually every government agency and many businesses spend substantial time and resources collecting, distributing, analyzing, transforming, and using information. In the past, manual procedures provided the only means for manipulating information. Today, automation and information technology represent powerful tools for maximizing the value of information.

As a major resource and asset, information technology requires effective planning and management. In this respect, information technology has much in common with other types of assets, such as human resources, capital facilities, and financial resources. All require some degree of formal structure to promote effective use and management. In addition, good planning and management should help to achieve certain principles for information technology. These include:

- Information technology must serve and respond to the mission, goals, and priorities of the sponsoring entity.
- Assessing and possibly redesigning the business process must precede decisions about applying a specific information technology solution.
- The planning and management process should treat information as a strategic resource that has value and should explore ways to maximize this value.
- Information belongs to the enterprise, and sponsoring entities should incorporate data sharing and the needs of other users in their plans, subject to privacy and confidentiality requirements.
- Information technology systems should be scalable, reliable, and efficient.

The goal of project management is to achieve the objectives of the project on time and within budget. Project management should define the responsibilities of project sponsors, and provide for adequate monitoring and reporting to the appropriate managers of the sponsoring entity and policy makers. It should allow a means to document benefits, monitor the scope and completion of projects, and compare costs.

The size and complexity of a project will determine the approach and structure required for good project management. Small projects may require only informal procedures. Large projects may require professional project managers and a formalized project management methodology. Project management is essential for projects that present unusual or high risks. These risks may include:

- Technical (such as new technologies to the state or the sponsoring entity),
- Work processes (such as new functions or different ways of performing functions),
- Organizational (such as dealing with multiple organizational entities),
- Legal, contractual, regulatory, or

- Other (such as system size, funding limitations, project duration, timetable flexibility, technical or business complexity, implementation challenges, importance to the operation of the organization, or interrelations with other systems).

The NITC intends to develop standards and guidelines regarding project planning and management that are supported by the Project Management Institute (PMI) through the Project Management Body of Knowledge (PMBOK). PMI is the leading nonprofit professional association in the area of project management. PMI establishes project management standards and provides seminars, educational programs and professional certification to the project management profession. The PMBOK is an inclusive term that describes the sum of knowledge within the profession of project management.

The PMBOK describes a project as a temporary endeavor undertaken to create a unique product or service. Types of information technology projects may include feasibility studies, research efforts, information technology strategic or other planning initiatives, system implementation, or development projects. These general procedures for project management and implementation include three components:

- Project Charter (to summarize expectations and responsibilities)
- Project Implementation Plan (to provide the detailed analyses that guide the project from beginning to conclusion)
- Project Tracking and Reporting (to communicate the progress of the project compared to expectations)

The activities related to Project Planning and Management address the following statutory duties of the NITC:

- *Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure;*
- *Adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel created in section 86-1511.*

Documentation: Appendix 12

Project Management Web site (http://www.nitc.state.ne.us/itpm/)

See also Section 4 of the State Technology Plan for planning requirements related to budget requests, agency comprehensive plans, technical reviews, technology investment priorities and project proposals.

Information Technology Clearinghouse and NITC.news

Lt. Governor Maurstad publicly announced the launch of the NITC's Web-based information technology clearinghouse for citizens, communities, education, and state government on September 25, 2000. With numerous categorized links to local, state, and national resources organized around its three advisory councils, the NITC clearinghouse will attempt to gather and share examples of best practices and opportunities to persons and organizations interested in information technology.

As the clearinghouse evolves, there are plans to make it more interactive with more searchable databases and examples submitted by users. Currently, all state agency technology plans can be viewed or located through the clearinghouse and a database of Nebraska free public access sites for Internet will soon be available. The clearinghouse can be visited at http://www.nitc.state.ne.us.

The NITC also distributes an electronic newsletter, NITC.news. The newsletter is released monthly, and contains timely articles and information related to information technology and telecommunications issues. Subscription is free and available to any individual who registers on-line. Information on how to subscribe can be found on the NITC Web site.

The NITC Clearinghouse and NITC.news addresses the following statutory duties of the NITC:

- *create an information technology clearinghouse to identify and share best practices.*

Documentation: NITC Information Technology Clearinghouse (http://www.nitc.state.ne.us)
Appendix 13 NITC.news (http://www.nitc.state.ne.us/news/index.html)

Significant Projects in Development:

Public Safety Statewide Communications Infrastructure

In 1999 Legislative Bill 446 provided funding for the Wireless Communication System Design Study and created the Public Safety Wireless Advisory Board. Under LB 446 the Division of Communications and the Public Safety Wireless Advisory Board have been commissioned to develop a feasible plan for a consolidated wireless communications system that will benefit all Nebraska public safety entities. The purpose will be to enhance the communications capabilities and interoperability of all state and local entities for emergency responses and in carrying out their routine duties more effectively and efficiently.

The Statewide Technology Plan included action items that called for recommendations on how the state could best:

- Develop entrepreneurial assistance and incentives for local governments to participate in a consolidated public safety communications system.
- Provide local public safety entities with wireless communications service options and feasible business case solutions.
- Encourage local participation through sustainable funding models.
- Advise local entities regarding participating in long-term cooperative agreements.
- Develop technical standards for design of wireless communications infrastructure.
- Develop cost effective advanced communications infrastructure design for Nebraska public safety entities.

The Draft Wireless Communications Plan, published in June 2000, completes the first phase of the yearlong study. The final report will be published in November of 2000. The design study outlines the recommendations and functional requirements for a wireless system architecture for Nebraska's public safety entities. The Division of Communications is managing the study, which will be completed by June 30, 2001.

The Public Safety Wireless Communications Infrastructure actions address the following statutory duties of the NITC:

- *Adopt policies to provide incentives for investments in information technology infrastructure services;*
- *Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure;*
- *Adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel created in section 86-1511.*

Documentation: (Draft) Wireless Communications Plan, June 2000
Appendix 14 (http://www.das.state.ne.us/doc/radiotf/DWCPlan.html)

Significant Projects in Development:

Geographic Information Systems (GIS) Strategic Plan

Geographic information is a significant subset of the information explosion that has occurred over the last two decades. In the broadest sense, geographic information is information that includes a spatial reference (street address, latitude/longitude, section/township) as part of the data and is generically referred to as *geospatial or spatial dat*a.

The geographic component of information has become increasingly important as information technologies, such as Geographic Information Systems (GIS), have been developed to analyze and display information based on its location. Location or place is an important aspect of most data collected and used by public agencies. GIS was initially developed primarily for use in the area of natural resources management. However, as the software's capabilities and the understanding of the technology has grown, the use of GIS has now expanded to include a wide and rapidly growing range of applications (assessment, economic development, transportation planning, public safety, emergency response, etc.). Because of the powerful capabilities of GIS and other geospatial technologies, many public agencies (state, local and federal) are making investments in the technology and more will do so in the future.

One of the more powerful features of GIS is its capability to facilitate the sharing and integration of data from a wide variety of data themes and sources. Past experience has taught public agencies the importance of coordination in making investments in information technology infrastructure. Public agencies have learned that through coordination they can aggregate demand and avoid the costly development of duplicate, non-compatible, computer and communication networks. As an understanding of GIS technology costs and requirements has matured, there is also a growing appreciation of the importance of coordination in the development of a common *spatial data infrastructure,* as a way to avoid the costly development of duplicate, non-compatible spatial data.

The GIS Steering Committee is currently pursuing several coordination initiatives and has identified others that are in need of attention. As part of its coordination efforts, the Steering Committee has informed the Nebraska Information Technology Commission (NITC) and Nebraska's Chief Information Officer (CIO) of these initiatives and of the need for additional resources to effectively fulfill its responsibilities. The GIS Steering Committee recognized it would be helpful to policy makers if they prepared a strategic plan that provides an overview of what needs to be done, the benefits of those initiatives, defines specific project proposals and outlines the resources required.

The GIS Strategic Plan addresses the following statutory duties of the NITC:

- *Adopt policies to provide incentives for investments in information technology infrastructure services;*
- *Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure;*
- *Adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel created in section 86-1511.*

Documentation: GIS Strategic Plan and Annual Report, "Building a Spatial Data Infrastructure for Nebraska" by the Nebraska GIS Steering Committee (September 2000) (http://www.calmit.unl.edu/gis/Strategic_Plan-2000.pdf)
Appendix 15

Significant Projects in Development:

Criminal Justice Information System (CJIS) Strategic Plan

CJIS originally developed a Strategic Plan in 1997. Although it described some 70 projects and an approximate 5 year timeline the document must be seen as fluid. CJIS has undertaken a review and is producing an update to the plan. This will include two primary activities: several CJIS initiated planning sessions and presentations as well as participation in a Criminal Justice Information Technology Planning Project through the National Governor's Association.

While the goals and objectives of CJIS remain the same as when the original strategic plan was developed, the vision has been refined through our past efforts and projects. The activities undertaken have built toward this vision while attempting to meet two themes: Each project should address multiple needs whenever possible and there should be no stand alone criminal justice IT projects.

It is important to remember that CJIS and the related initiatives provide a fluid environment that requires diligent oversight and continued improvement. The planning process allows CJIS to evaluate progress as well as plot future direction.

The main business goals (to increase user access, improve data quality, improve data completeness, maximize system efficiency and ensure privacy rights) have taken hold in the broader data access philosophy -- a vision of an integrated criminal justice system, where data is passed electronically across and within agencies as a person moves through the criminal justice system. CJIS anticipates adding certain technology goals that include a standards based environment, leveraging new technologies, responsive technology support, system flexibility, information sharing facilities, information security, business performance data and minimized complexity. The business and technology goals provide CJIS with targets to see how the organization not only approaches computerization but also how well the needs of the users are met.

The updated plan, like its predecessor, will highlight various projects that the CJIS Advisory Committee identifies as priorities and targets for implementation in the near future. Although timelines and costs estimates will be included, it is important to recognize the project is still under the restrictions of limited staff, resources and funding.

The updated CJIS Strategic Plan should be completed by late 2000.

The CJIS Strategic Plan addresses the following statutory duties of the NITC:

- *Adopt policies to provide incentives for investments in information technology infrastructure services;*
- *Adopt guidelines regarding project planning and management, information sharing, and administrative and technical review procedures involving state-owned or state-supported technology and infrastructure.*

Documentation: not yet available; see CJIS Web site (http://www.cjis.state.ne.us/)

Significant Projects in Development:

Community Leadership and IT Planning

An action item in the Statewide Technology Plan calls for the NITC, working through the Community Council, to develop a coordinated plan for addressing the information technology training and development needs of Nebraska's rural communities, including developing a database of information technology development resources; performing a gap analysis of additional, needed resources; and developing strategies for focusing and addressing rural community needs.

In order to prosper in the increasingly competitive global economy, rural communities must be prepared to fully participate in the Information Age. Currently there are a number of IT development programs in the state, ranging from introductory Internet training to network certification training programs. There is, however, no coordinated plan for addressing the broad spectrum of IT training and development needs in rural communities.

The NITC sponsored a half-day workshop at the League of Municipalities Annual Convention, held in October 2000. The workshop featured presentations on organizing community information technology committees, funding sources for IT development, IT applications and services developed for and by local governments, an overview of telehealth issues, and using IT as an economic development tool.

The NITC has also developed the *Building Information Age Communities Community Assessment* instrument , a resource document that allows communities to assess their information technology resources and to map planning requirements and future actions.

The Community Council has identified community training and information technology development as one of its top priorities. The guidelines and awards for Community Technology Fund grants reflect this priority.

These actions address the following statutory duties of the NITC:

- *Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, research and development investment, support and maintenance requirements, and system usage and assessment guidelines.*

Documentation: Building Information Age Communities Community Assessment
Appendix 16 (http://www.nitc.state.ne.us/itc/community/planning.htm)

See also Community Technology Fund grants

Significant Projects in Development:

Telehealth Feasibility Study

An action item in the Statewide Technology Plan directed the NITC to conduct a study to evaluate the infrastructure and economic requirements to deliver telehealth services throughout Nebraska. The study will examine the role that telehealth services might play in addressing medical needs of Nebraskans, particularly in rural areas. Deliverables from the study would address infrastructure and operational requirements, as well an economic evaluation of providing telehealth services on a broad scale in Nebraska. The study may include reports on:

1) community needs,
2) the potentially conflicting incentives, costs, and benefits to different interested parties,
3) the current geographic distribution of resources;
4) an estimate of infrastructure and operational costs;
5) a methodology for conducting ongoing impact assessment once such a system has been implemented.

The information obtained in the context of this study can be used by planners, in conjunction with current information on costs, to devise multi-year plans for a strategic, statewide implementation of telehealth technology and applications.

Telehealth services have the potential to improve access to health services for all Nebraskans. However, the cost of equipment and telecommunications services, the low population density of areas served, and conflicting interest of health care providers and organizations are impeding the expansion of telehealth services. In order to provide services across the state, careful assessment and planning are essential.

Design of the survey instrument and study has been undertaken by personnel and resources from the University of Nebraska, in consultation with members of the Community Council and its Telehealth Subcommittee.

The Telehealth Feasibility Study addresses the following statutory duties of the NITC:

- *Adopt policies to provide incentives to for investments information technology infrastructure services;*
- *Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, research and development investment, support and maintenance requirements, and system usage and assessment guidelines.*

Technical Architecture Standards and Guidelines in Development

Adhering to a sound set of standards for information technology can reduce costs and improve service delivery. Statute requires the Technical Panel to recommend standards and guidelines to the NITC for adoption. Enforcement of NITC standards and guidelines depends entirely upon cooperation of other entities with such authority. These procedures permit both the NITC Technical Panel and users to propose standards and guidelines. By statute, the Technical Panel may recommend technical standards and guidelines to the NITC. In addition, any state agency, political subdivision, educational institution, or other information systems user in Nebraska may propose standards or guidelines for information technology. The technical panel will review the proposal and then invite comments from other information technology coordinating bodies, other government agencies, and the public. The Technical Panel and NITC shall observe the following principles when recommending and adopting standards and guidelines:

- Data are shared, consistent with security and confidentiality requirements.
- The infrastructure uses advances in technology that are scalable, reliable and cost-effective.
- Design and development of the statewide infrastructure are collaborative.
- The telecommunications infrastructure is based upon open-systems concepts to assure universal access and interoperability.
- Affected entities should have a reasonable time to implement a standard or guideline.
- The NITC should weigh the benefits of a standard or guideline against the cost of implementation.

The Technical Panel of the NITC will undertake a review of the current architecture. The review will identify problems as well as strengths. In cooperation with the Councils of the NITC, the Technical Panel will identify the important business drivers that will determine the adequacy of the architecture in the future. The Technical Panel may sponsor studies of specific components and issues pertaining to the architecture. Based on this information, the Technical Panel will develop a state enterprise architecture framework which:

- Categorizes the architecture into useful components;
- Defines the scope of each component;
- Establishes principles to guide the development of each component of the architecture.

The Technical Panel shall recommend technical standards and guidelines to assist implementation of the architecture. The Technical Panel shall recommend policies and strategies to support the transition from the current to the target architecture. The

architecture framework should reflect the unique requirements of different sectors of the state. Preparing the framework should reflect a collaborative effort. A state enterprise architecture framework should not impede the rapid deployment of appropriate technology or establish cumbersome regulations or bureaucracy.

Given the complexity, scope, and changing nature of technology at the statewide level, developing the state enterprise architecture framework must follow an incremental approach that focuses on functional groups with shared interests. The framework should address the goals of interoperability, better information and greater efficiency within and between functional groups.

The Technical Panel currently has established three workgroups working on technical architectures:

- **Security architecture** includes protection of the physical, intellectual, and electronic assets of the state, including its security policies, network access controls, virus protection, network administration, transaction security, and workstation security. The security architecture must address issues relating to authentication, authorization, confidentiality, data integrity, non-repudiation, and isolation.
- **Network architecture** defines and provides guidance for the communications infrastructure and issues relating to interconnectivity of systems. This includes physical and logical network topologies as well as the software protocols that enable all the devices to interoperate with one another.
- E-government and e-commerce represent the introduction of a recent wave of technological innovations. For purposes of this charter, "**E-government architecture**" is defined as "the use of technology to enhance information sharing, service delivery, constituency and client participation, and governance by transforming internal and external relationships. " This includes transactions between government and business, government and citizen, government and employee, and among different units and levels of government. Examples include but are not limited to the topics of portal, applications, payments, privacy, and security. Authentication, encryption, EDI interfaces are also subsets of an e-government foundation. Re-using common applications, such as order taking plug-in, shopping cart plug-in, and cataloguing plug-ins, indexing or use of metadata tags for searching state information are also examples.

The Technical Panel also has a committee engaged in developing an **assistive technology clause** to be included in all state contracts, as mandated by state and federal law. The clause will be established by January 1, 2001.

The development of architecture guidelines and standards and related activities address the following statutory duties of the NITC:

- *Adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel created in section 86-1511.*

Documentation: See Part 3 of Statewide Technology Plan

See also Technical Panel Workgroups on NITC Web site (http://www.nitc.state.ne.us/tp/subcommittees.htm)